**HR Attrition and Performance by Suhasini Pallai**

**Executive Summary**:

HR Analytics is the application of a methodology and integrated process for improving the quality of people-related decisions to improve individual and organizational performance.

Attrition relates to people who leave the organization on various factors. If a company has high attrition, they must continuously advertise, conduct interviews and hire new employee. This involves lot of time and the company must face lot of consequences till a new employee fits into the position.

The project is based on HR Attrition dataset taken from IBM data. The focus of this project is to understand the various reasons the employees of the company decide to resign or retire. These factors needs to be determined so that the employees are approached with various beneficial options and the attrition rate can be reduced to increase the productivity and retain the valuable employees.

There are different causes of attrition and I would like to find the answers for the questions from the dataset.

* What are the main causes of employee attrition at a workplace?
* Are they age related or are there any other factors?
* Can the business travel, distance from home, performance rating be a major factor on employee attrition?
* Can a model be built based on the available dataset to predict whether the employee is going to resign or not?

**Motivation**:

The main motivation for taking up this project is to understand the employee from the employer’s point of view, gain insights from the data and predict whether the employee is going to resign or not. Based on the outcome, the company can formulate various strategic plans in the department of the organization.

**Data Question**:

Did the employees of the company resign because of not being recognized by the company? Was the business travel too much for the staff? Or did the employee leave because of age related factor. Did the employee meet the Job satisfaction criteria? If not, was it a factor too. Can any strategic plans be taken to retain this valuable employee?

**Hypothesis**:

My hypothesis is that most of the employees leave their job if the job involves lot of travel and age related also. They might resign if they do not meet out the expected promotion and job satisfaction is not up to the level. Young employees would likely change between jobs very frequently. The employee attrition rate can be reduced by having a direct talk with the staff and giving various benefits to the employee.

**Schedule**:

1.Get the data - (06-15-18)

2.Clean & Explore the data - (06-25-18)

3.Build & Deploy Shiny App (07-10-18)

4.Document /Pitch Shiny App thru Presentation (07-15-18)

5.Individual Presentations (including Presentation & Demonstration of your app – (07-20-18)

**Data Sources**:

I would like to check with the IBM’s HR attrition data set and try to incorporate a model for predicting whether an employee is about to leave the company or not. And compare with the various performance related features of the employee.

**Known Issues & Challenges**:

The main challenge will be to handle the missing data, correlate the features, visualize them and incorporating feature engineering to predict a model based on various features in the dataset.